“To promote safety, protect the environment and conserve resources offshore through vigorous regulatory oversight and enforcement.”
Agenda

• General Info
• Types of Unitization
• Competitive Reservoirs & Compulsory Unitization
• Unit Area
• Requests for Unitization
• Unit Suspensions & Unit Termination
Unitization

Combination of 2 or more leases for joint exploration or development of common hydrocarbon accumulations under terms of…

- Unit Agreement
- Unit Operating Agreement

Purpose/Requirements

(30 CFR 250.1300-1301)

- Promote & expedite exploration & development
- Conserve natural resources
- Prevent waste
- Protect correlative rights, including Federal royalty interests
Gulf of Mexico Units

- 164 Active Units
  - 125 Exploration
  - 39 Reservoir

2018 data
Benefits of Unitization

- Aid development of projects owned by different companies
  - Prevent negative competition

- Orderly exploration & development of multiple leases
  - Eliminate unnecessary wells, platforms, pipelines
  - Optimize drilling regardless of manmade boundaries & lease expiration dates

- Share costs & risks
  - Share drilling rigs
  - Share expertise & proprietary data

- Promote maximum ultimate recovery of oil & gas
  - Joint development of common geological structure
  - Optimal placement of production and/or injection wells

- Expedite exploration and development
Effect on Lease Term
(30 CFR 250.180 & 250.1301(g))

- If lease, or any part of lease, is subject to Unit Agreement, entire lease remains in effect as long as there are lease-holding operations extending unit or unit suspension is in effect.

- Lease-holding Operations (+1 yr)
  - Drilling
  - Well-rewarking
  - Production in paying quantities
Impact of Units

**Producing Leases**
- Unit: 32%
- Non-Unit: 68%

**Gas Production**
- Unit: 49%
- Non-Unit: 51%

**Oil Production**
- Unit: 73%
- Non-Unit: 27%

2017 data
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Types of Unitization

- **Voluntary**
  - Exploration
  - Reservoir

- **Compulsory**
  - Reservoir
Types of Unitization

Exploration

Reservoir
Exploration Units

- Sometimes referred to as...
  - Exploration Development and Production units
  - Exploratory units
  - Fieldwide/Field units

- Often formed before 1st well
  - Can be formed later (even after 1st prod)

- Promote & expedite exploration & production

- Unit area
  - Potential hydrocarbon accumulations (geologic structure) common to 2 or more leases
  - Min # leases (or portions of leases)
  - Leases with potential to contribute to unit via well(s)
  - Based on seismic, well logs, etc
Reservoir Units

- **Sometimes referred to as…**
  - Development and Production units

- **Common & competitive reservoir**
  - Reservoir reasonably delineated
  - Development drilling complete or nearly complete
  - Productive well on all leases

- **Can have multiple reservoir units on 1 lease**

- **Allocation = Net acre ft**

- **Unit area = reservoir**

![Diagram showing allocation of reservoir units between Lease 1 and Lease 2. Lease 1 has 80% allocation and Lease 2 has 20% allocation.](attachment:image.png)
Transboundary Unitization

- Exploration Units
- Reservoir Units

- **Model Unit Agreement for each type** (in progress)
  - Acceptable templates for actual Unit Agreements

- *Agreement between the United States of America and the United Mexican States Concerning Transboundary Hydrocarbon Reservoirs in the Gulf of Mexico* (2012)
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Competitive Reservoir
(30 CFR 250.1302)

- **Competitive Reservoir (CR)**
  - Single rsrvr. with 1 or more producing/producible completions on 2 or more leases with different operating interests

- **BSEE may require dev & prod ops in CR**
  - Under joint CR Development Program (CRDP), or
  - Unitization

- **Operator may request BSEE determination of CR**
  - BSEE preliminary determination
  - Operator 30 days to concur/object
  - BSEE final determination

- **If CR determined**
  - Lessees submit joint CRDP
  - If can’t agree on CRDP within 90 days
    - Lessees submit separate CRDPs
    - BSEE hearing
    - If necessary, BSEE initiates compulsory unitization
Compulsory Unitization
(30 CFR 250.1301(b) & 1304)

• BSEE may require unitized operations

• Action may be initiated by BSEE or lessee
  • Lessee request must include
    • Proposed Unit Agreement
    • Proposed Unit Operating Agreement
    • Proposed Initial Unit Plan of Operation
    • Supporting data

• Purpose
  • Prevent waste
  • Conserve natural resources, or
  • Protect correlative rights, including Federal royalty interests

• Reasonably delineated & productive reservoir

• 4 active
• 18 historically
• None since 1992
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Unit Area


• Min. number of leases that will allow lessees to minimize number of platforms, facility installations, & wells necessary for efficient exploration, development, & production of...
  • Oil & gas reservoirs (Reservoir Units)
  • Potential hydrocarbon accumulations common to 2 or more leases (Exploration Units)

• Reservoir Unit
  • Single reservoir
  • Encompass entire productive area of reservoir

• Exploration Unit
  • Single geologic structure
  • Encompass entire geologic structure
  • Only those leases needed for efficient exploration, development & production

• Whole leases or portions of leases
Unit Area

Approvable

- Logical unit area (common structure)
- Adjacent leases
- Each lease potentially supports well

Not Approvable

Expanding leases
Proposed unit outline
Amplitude anomalies
**Unit Revisions**  
(Unit Agreement)

- **Expansion**
  - Areas necessary for unit ops or capable of production in paying quantities
  - Proper for prevention of waste, conservation of resources, or protection of correlative rights including Federal royalty interests

- **Contraction**
  - (In addition to automatic contraction to Participating Area after ___ yrs)
  - When necessary or advisable to conform with purposes of Unit Agreement
  - Unit Area not reduced due to depletion of oil or gas
• Assume 10 million bbl reservoir (green area)
• Assume 1 million bbl on southern lease (10%)
• Assume 2 million bbl produced
• Southern lease would have received 10% allocation = 200,000 bbls
• If removed from the unit at this time, owner of southern lease would lose 800,000 bbls of its allocation
• If royalty interests differ, Federal royalty interests could be harmed
• All acreage remains in unit & receives allocation until reservoir depletion to protect interests of all parties
• Relinquishment of lease in unit participating area requires prior BSEE approval (Unit Agreement)
Participating Areas
(Unit Agreement & 30 CFR 250.205)

- Portion of unit reasonably proven capable of producing in paying quantities
  - Drilling & completion of producible wells,
  - G&G info, and/or
  - Engineering data

- Approved by BSEE – Initial PA effective at 1st prod (Exhibit C)

- % of oil & gas allocated to each lease within PA
  - Volumetric (acre-ft)
  - Surface area (acres)

- BSEE may take special measures to protect Federal royalty interests
  (30 CFR 250.205)
  - If well drains higher royalty lease, BSEE may require inclusion of that lease in PA

- Acreage not removed from PA due to depletion of oil/gas
- Sometimes more than 1 PA
Automatic Contraction of Unit Area
(Unit Agreement)

- Unit Area contracts to Participating Area after ____ yrs (specified in Unit Agreement)

- Automatic contraction effective on the specified anniversary of effective date of initial Participating Area (i.e., first production)
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Unitization Documents
(30 CFR 250.1301(d), 1301(e), & 1303)

• **Unit Operating Agreement – Contract between companies**
  - Submitted to BSEE (but not approved by BSEE)
  - Describes how all costs & liabilities allocated
  - Describes how all benefits allocated

• **Unit Agreement – Contract companies sign**
  - Submitted to BSEE for approval
  - Designates unit operator (who accepts duties & obligations), specifies effective date of unit, establishes method of production allocation, stipulates automatic contraction, etc.
  - Exhibit A – map of unit area
  - Exhibit B – table with leases & ownership of each
  - Exhibit C – table with leases in Participating Area, and % of oil & gas allocated to each lease

• **Proposed Initial Unit Plan of Operation** (with request letter)
  - All unit ops conducted under a BSEE-approved Unit Plan of Operation
  - Expires on date specified – usually resubmit annually
Supporting Information
(30 CFR 250.1303 & 250.125)

• Justification
  • How will unit promote exploration & development?
  • Will unit conserve natural resources, prevent waste, or protect correlative rights?

• Lease history & proposed initial unit operations overview

• Summary of discovery well findings

• Subsurface Information
  • Latest 3D seismic
  • Representative seismic lines through prospect
  • Structure & amplitude maps
  • Well logs, correlations, petrophysical analyses, & engineering data

• Cost recovery fee
  • Currently $12,619 – Voluntary unitization proposal or unit expansion
  • Currently $896 – Unitization revision
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Unit Suspensions
(30 CFR 250.1301(g) & 250.168-177)

- Same criteria as lease suspensions
- Requested by operator
- Directed by BSEE
- Suspension of Production (SOP)
- Suspension of Operations (SOO)
Unit Termination
(30 CFR 250.180, 250.1301, & Unit Agreement)

- If 1 or more unit leases beyond primary term, continuous program needed:
  - Drilling
  - Well-reworking
  - Production in paying quantities
  - Lapses no more than 1 yr or Unit SOO/SOP

- Automatic termination when unit ops permanently abandoned
Questions?
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Bureau of Safety and Environmental Enforcement

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